

Claims

What is claimed is:

1. An acetabular prosthesis, comprising:
 - an acetabular shell;
 - an acetabular articulating component having a hemispherical shape, a base portion, and an inner surface forming a partial spherical cavity adapted to receive a femoral ball, the articulating component being connectable to the shell; and
 - an acetabular constraining component having a spherical surface, wherein the constraining component is connectable to the base portion of the articulating component so the spherical surface is continuous with the inner surface to enlarge the spherical cavity to be more than a hemisphere to capture the femoral ball.
2. The acetabular prosthesis of claim 1 further comprising a locking mechanism to removeably connect the constraining component to the articulating component.
3. The acetabular prosthesis of claim 2 wherein the locking mechanism includes a plurality of passages circumferentially disposed along an annular surface of the base portion.
4. The acetabular prosthesis of claim 3 wherein the constraining component engages the passages to connect the constraining component to the articulating component.
5. The acetabular prosthesis of claim 4 wherein the constraining component includes a plurality of projections circumferentially disposed along an annular surface to engage the passages.
6. The acetabular prosthesis of claim 2 wherein the locking component snappingly engages to connect the constraining component to the articulating component.

7. The acetabular prosthesis of claim 2 wherein the locking component threadably engages to connect the constraining component to the articulating component.
8. An acetabular component, comprising:
 - an acetabular articulating component having a hemispherical shape and an inner surface forming at least a partial spherical cavity adapted to receive a femoral ball;
 - an acetabular constraining component connected to the articulating component and having a spherical surface that is adjacent the inner surface to enlarge the spherical cavity to be more than a hemisphere to capture the femoral ball; and
 - a locking mechanism formed on both the articulating and constraining components to removeably connect the constraining component to the articulating component.
9. The acetabular component of claim 8 wherein constraining component has a semi-circular shape from a bottom view.
10. The acetabular component of claim 9 wherein the constraining component has a wedge shape from a side view.
11. The acetabular component of claim 8 wherein the articulating component includes a base portion with a flat annular surface, and the constraining component has a partial ring shape and includes a flat surface seated against the annular surface of the base portion.
12. The acetabular component of claim 11 wherein the constraining component has a triangular shape from a side view.
13. The acetabular component of claim 8 wherein the locking mechanism includes a plurality of passages formed in both the articulating and constraining components and further includes a plurality of screws engageable with the passages to connect the constraining component to the articulating component.

14. The acetabular component of claim 8 wherein the locking mechanism includes a plurality of passages formed in the articulating component and a plurality of projections extending outwardly from the constraining component.
15. The acetabular component of claim 14 wherein the projections snappingly engage with the passages.
16. An acetabular prosthesis adapted to replace a portion of a natural acetabulum, the prosthesis comprising:
 - an acetabular shell;
 - an acetabular insert connectable to the shell and having an inner surface that forms a spherical cavity to articulate with a femoral ball;
 - a constraining component connectable to the insert, the constraining component having one side with a spherical surface that is continuous with the inner surface to enlarge the spherical cavity to be more than a hemisphere.
17. The acetabular prosthesis of claim 16 wherein the constraining component is semi-circular and wedge shaped.
18. The acetabular prosthesis of claim 17 wherein the constraining component removeably connects to the acetabular insert.
19. The acetabular prosthesis of claim 18 wherein the constraining component is adapted to capture the femoral ball in the spherical cavity.
20. The acetabular prosthesis of claim 16 wherein the acetabular insert has a base portion, and the constraining component connects to the base portion to form a spherical extension to the acetabular insert to retain the femoral ball.